Memorandum

Subject: Knox County (near Galesburg)

Porcine Farms, LLC CAFO - Facility Inspection

To: DWPC/FOS and RU
From: Todd R. Huson, DWPC-FOS, Peoria Region
Date: May 23, 2011

On May 23, 2011 a CAFO facility inspection was performed at Porcine Farms, LLC. The weather was warm and sunny. Owner/operator, Brian Robinson, was interviewed by telephone and gave permission to inspect the facility. Bio-security procedures were followed.

General Information

Brian Robinson operates this large farrow-to-finish, swine facility through Porcine Farms, LLC. Brian and Jennifer Robinson recently completed the purchase of this facility from Donald Reeder. This livestock facility is located at 22 Knox Road 1400 N, Galesburg, Illinois 61401 (NW ¼ Section 30, T11N, R1E, Galesburg Twp, Knox Co.) The office telephone number is (309) 341-1600 and Brian's cell number is Exemption 6 and Exemption 7(C) This facility typically has 10 full-time employees on site. Brian Robinson and Exemption 6 and Exem Bill Robinson, are certified livestock managers. Brian also operates their recently expanded crop operation from this site.

Swine Production Facility – Specific Information

This swine production facility has ~800 sows, ~2,500 swine < 55#, and ~4,500 swine > 55#. The facility typically produces ~15,000 swine yearly (~13,000 to market weight and ~2,000 to feeder pig weight). This swine operation provides breeding stock for other producers. Swine not sold as replacement gilts are finished to market weight. The majority of these swine are shipped to Tyson Foods pork processing plant in Columbus Junction, Iowa. The remaining swine are shipped to Farmland Food's pork processing facility in Monmouth, Illinois.

This swine production facility consists of seven total confinement buildings (one nursery, one gestation, one farrowing, and four finishing units). The facility also has a home with a garage, several equipment/maintenance buildings, an office/utility building, and a feed mill with numerous storage silos. An aggregate access road was provided to each structure. Water is obtained from three wells on site and 240-V, 3-PH, electrical power is obtained from McDonough Power. This service has reportedly been reliable. The facility also has a 75-KW emergency generator.

Finishing Buildings:

The southwest finishing unit is ~256' long and ~44' wide with an 8' deep pit. The southeast finishing unit is ~272' long and 44' wide with an ~8' deep pit. The northeast finishing unit is ~214' long and ~50' wide with a ~8' deep pit. The north finishing unit is ~96' long and ~56' wide with an 8' deep pit.

Gestation Building:

The gestation unit was expanded since the initial construction. This unit is ~500' long and ~41' wide with 8' deep pits under the end sections and 4' deep pits under the center section.

Farrowing Building:

The 160 crate farrowing unit is ~210' long and ~50' wide with 18" shallow pull-plug pits. Wastewater generated in this unit is diverted from the pull-plug pits into the gestation building pit.

Nursery:

The nursery unit is ~175' long and ~50' wide with 18" shallow pull-plug pits. This unit was constructed over an existing 6' deep grower-building pit. The shallow plastic pull-plug pits were set on a concrete slab. Wastewater generated in the nursery is diverted into this 6' deep pit or to the northeast finishing building pit.

Building Ventilation and Heating:

Ventilation is provided in the gestation and finishing buildings through curtain walls, roof vents, and pit fans. Ventilation is provided in the nursery and farrowing buildings through wall fans and roof vents. Natural ventilation is utilized whenever possible instead of forced air ventilation. This appears to have minimized off-site odors. Roof vents are used primarily for attic ventilation. Natural gas unit heaters are utilized in the nursery and farrowing buildings. All structures are bird-tight to address bio-security concerns. Wire mesh was used to seal openings in these structures.

Storm Water Runoff/Perimeter Drainage Tiles:

The structures do not have gutters or downspouts. Fill was placed up to the curtain wall to enhance drainage away from the structures. Storm water drains through several swales, culverts (under the aggregate roads), and drainage ditches to a storm culvert under County Road 1400 N. The runoff eventually enters a stream. No runoff problems were noted. The confinement buildings do not have perimeter drain/foundation tiles.

Feed – Additives:

This facility operates a feed mill on site. Feed rations consist primarily of corn and soy bean meal with a few additives, such as mono-calcium phosphate and lime (for calcium). Some DDG is also fed to the swine.

Wastewater Storage/Treatment

The confinement building pits provide a total combined storage capacity of ~ 3.14 MG with 1' of freeboard in each pit. However, the capacity is reduced somewhat when some wastewater is left in the pits (typically 1') following disposal. Brian indicated that ~4 MG are typically disposed from this facility annually, therefore; the combined pit capacity provides 8 - 10 months storage. Wastewater is transferred between the pits to provide maximum storage and improve nutrient consistency.

Confinement Building	Dimensions Length/Width	Pit Depth			Capacity (1' F.B.)	Capacity (1' F.B.)	Capacity (1' Sludge)
		Max	1' F.B.	1'Sludge			
Finishing Units							
SW Building	256' x 44'	8'	7'	6'	78,848 cu-ft	0.59 MG	0.51 MG
SE Building	272' x 44'	8'	7'	6'	83,776 cu-ft	0.63 MG	0.54 MG
NE Building	214' x 50'	8'	7'	6'	74,900 cu-ft	0.48 MG	0.48 MG
N Building	96' x 56'	8'	7'	6'	37,632 cu-ft	0.28 MG	0.24 MG
Gestation Unit							
West Section	~120' x 41'	8'	7'	6'	34,440 cu-ft	0.26 MG	0.22 MG
Central Section	~260' x 41'	4'	3'	2'	31,980 cu-ft	0.24 MG	0.16 MG
East Section	~120' x 41'	8'	7'	6'	34,440 cu-ft	0.26 MG	0.22 MG
Nursery Unit	175' x 50'	6'	5'	4'	43,750 cu-ft	0.33 MG	0.26 MG
Total Capacity					419,776 cu-ft	3.14 MG	2.63 MG

Several water conservation measures have been implemented at this facility. Watering nipples with cups were installed, which have significantly reduced the amount of spillage. However, Brian noted that slightly more wastewater is produced when DDG is feed.

Nutrient Management Plan

A nutrient management plan was developed for the disposal of wastewater to cropland. This plan is maintained on site and includes testing of wastewater and soils, and maintaining records of disposal operations; including field locations, # available acres, # loads, application rates.

Wastewater composite samples consist of several grab samples obtained during the fall application. Soils samples are obtained from the application fields every four years. Wastewater and soil samples are sent to SGS, Inc. (formerly Mowers Soil Testing Plus), 117 E Main St, Toulon, Illinois 61483-0540, (309) 286-2761 for analysis.

Wastewater and Manure Solids Disposal

Wastewater is pumped directly from the building pits into a tank wagon and applied to cropland. A 6" PTO pump is used to agitated and pump this wastewater. The pits are normally emptied in the fall and occasionally in the late winter/early spring. Wastewater is occasionally disposed on wheat fields in the summer. Wastewater is applied to the 280 acres adjacent to the facility and to several other fields within 2 miles of the facility. The facility reportedly has ~1,000 available acres. Brian reportedly disposes ~4,000,000 gal per year.

Wastewater is normally incorporated on corn and bean fields with a new Nuhn 6000 gallon honey wagon with a relatively new tool bar attachment containing five Dietrich injectors (coulters and sweeps). This attachment is set up to inject the wastewater 4" to 6" deep @ ~6,000 gallons/acre.

Wastewater is surface applied on wheat fields in the summer and occasionally on frozen/snow covered ground next to the facility in the winter. Wheat is specifically planted to this provide this option. No odor or runoff-problems associated with the surface application were reported. However, disposal on frozen/snow covered ground is not recommended.

Dead Swine Disposal

Dead swine are temporarily stored on site in a covered, elevated, dead box. The dead swine are picked-up twice a week by Schnowske's transfer service and taken to a rendering facility. Schnowske & Sons Rendering Service is located at 10507 Illinois Highway 82, Cambridge Illinois 61238, (309) 937-3323. The facility averages ~700 dead swine per year.

CAFO Designation

Porcine Farms, LLC farrow to finish facility is a large confined animal feeding operation, as defined by the clean water act.

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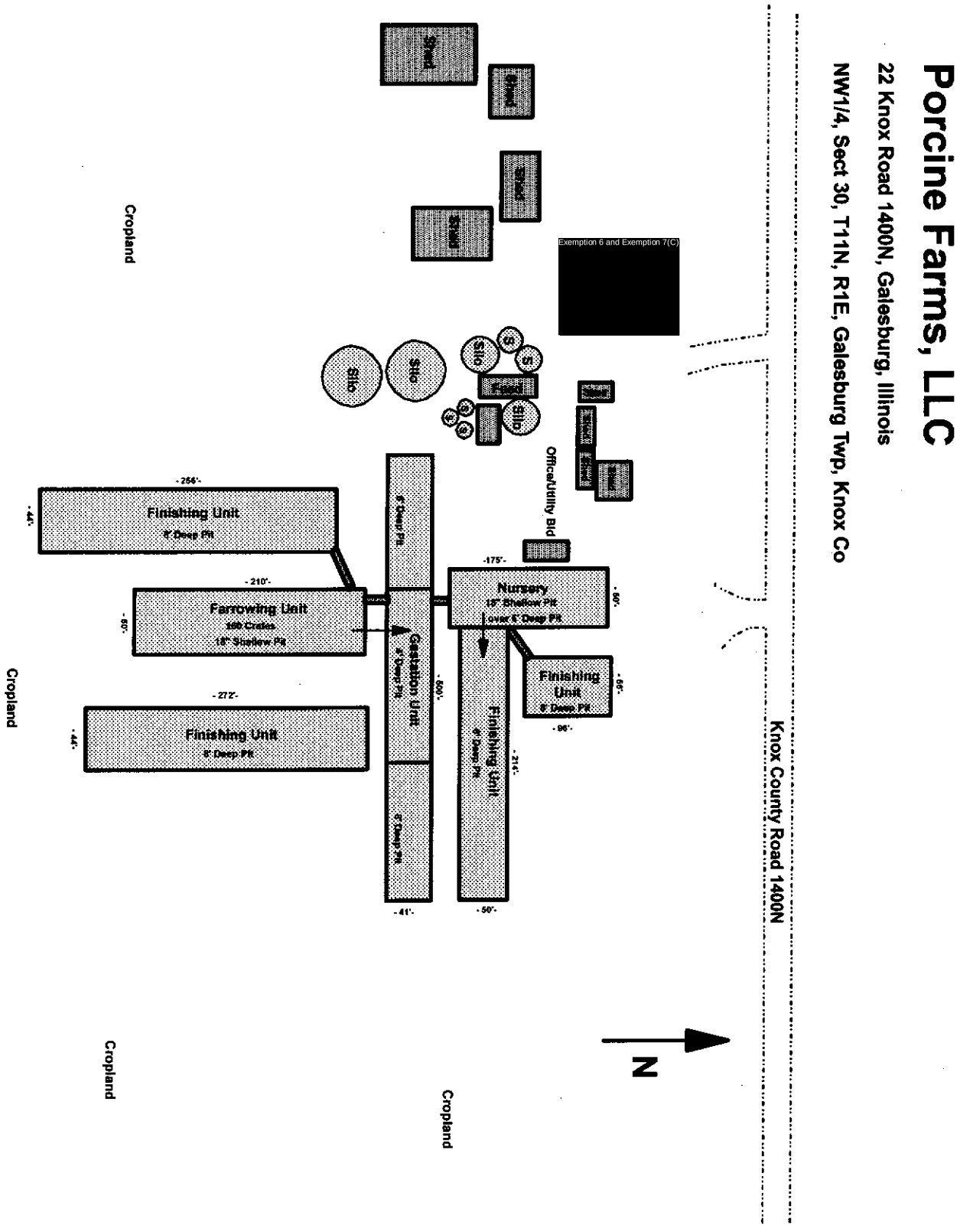
Att: Site Diagram

CC: Peoria Files

Todd R Huson


Porcine Farms, LLC
22 Knox Road 1400N, Galesburg, Illinois
NW1/4, Sect 30, T11N, R1E, Galesburg Twp, Knox Co
Knox County Road 1400N
Exemption 6 and Exemption 7(C)
Shed
Shed
Shed
Silo
Silo
Silo
Silo
Silo
Office/Utility Bld
Finishing Unit
8' Deep Pit
Farrowing Unit
Gestation Unit
Nursery
Finishing Unit
Finishing Unit
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